

Red Hat Integration

Cloud-native connectivity for applications and systems

Features

- API-centric and event-driven application and data integration
- API management and security
- Streamlined integration, messaging, and data streaming capabilities with more than 200 connectors
- DevOps-ready application deployment
- Hybrid cloud and container-native infrastructure

Benefits

- Connect applications in modern or legacy systems in any combination of public clouds, private clouds, or on-premise
- Build and deploy applications with access to all the necessary digital assets
- Gain more insight into data and deliver engaging customer experiences
- Boost productivity with streamlined development of integration and messaging capabilities
- Minimize time to market with support for modern agile development processes
- Incorporate disparate database changes into streaming processing to create more complete datasets for applications

Product Overview

Red Hat® Integration provides developers and architects with cloud-native tools for integrating applications and systems. It offers capabilities for application and application programming interface (API) connectivity, API management and security, data transformation, service composition, service orchestration, real-time messaging, data streaming, change data capture, and cross-datacenter consistency.

Red Hat Integration was built for cloud-native development, so developers can use the same advanced build, management, and runtime platforms to connect systems that they use for new service development and integration. The cloud-native tools create deployable artifacts for cloud-native platforms. Platforms can be combined for public cloud, private cloud, and on-premise environments for scalable, highly available microservices using powerful container management tools.

Red Hat Integration embeds intuitive IT productivity tools in the developer toolchain, improving integration and allowing microservice teams to participate in high-velocity development.

Use case	Benefit of Red Hat Integration
Software-as-a-Service (SaaS) and cloud integration	Connect data, processes, and policies across multiple SaaS applications or from SaaS to on-premise applications.
API-first development	Build applications with an API-first approach to deliver, scale, and share business services internally and externally.
Connect cloud-native applications	Build integrations between modern apps or data, which are built in the cloud using container-based microservices architectures.
Real-time, event-driven applications	Build event-driven applications to respond and analyze business events in real-time, using technology like Apache Kafka.
Customer engagement hubs	Build unique, personalized customer engagements powered by real-time business events and situational awareness.
Artificial intelligence (AI) streams	Create real-time streams that inference engines can use for rules processing.

Table 1. Representative use cases of Red Hat Integration

Get started

[Download and start developing](#) with Red Hat Fuse, Red Hat 3scale API Management, or Red Hat AMQ.

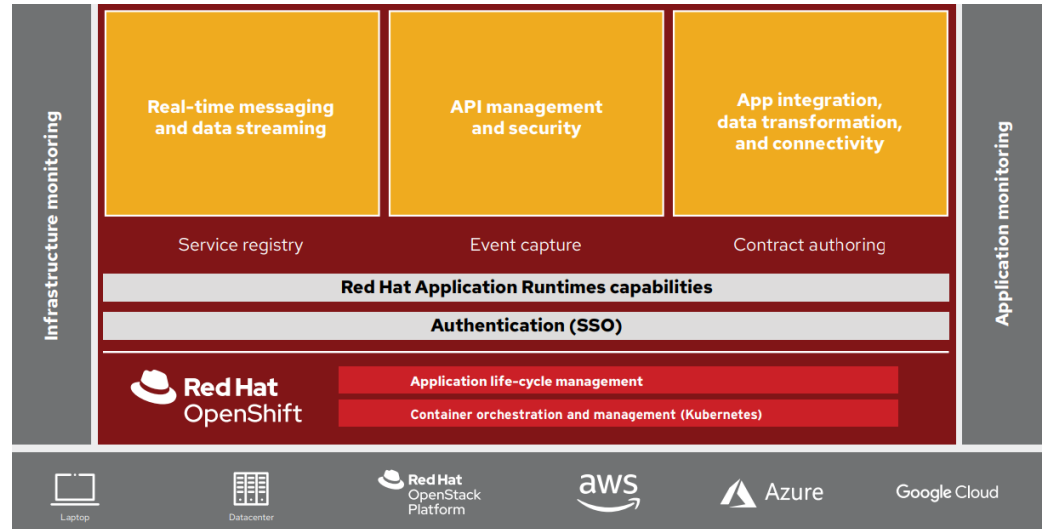


Figure 1. Red Hat Integration capabilities

Features and benefits

Red Hat Integration is a comprehensive set of agile integration and messaging products that provide service composition and orchestration, real-time messaging, data streaming, and API management. Combined with a sophisticated container platform and cloud-native toolchain, Red Hat Integration lets developers connect applications and data with a variety of internal and external systems across hybrid architectures.

Key features	Benefits
Pluggable connectors	Improve the capabilities of your applications and maximize the value of your digital assets by offering more than 200 options for connectivity between applications and modern or legacy systems.
DevOps-ready application deployment	Supports sprints, rapid releases, microservices deployment, and agile processes to minimize time to market. Allows microservices developers and DevOps teams to build and deploy applications with access to necessary digital assets—without requiring changes to the developer's schedule, tools, or practices.
Hybrid cloud and container-native infrastructure	Provides scalability and high availability using Kubernetes to create, extend, and deploy containerized integration services across hybrid cloud environments.

Key features	Benefits
Streamlined integration, messaging, and data streaming capabilities	Boosts productivity by unifying the development and management of integrated solutions across the enterprise and beyond.
Self-service integration and messaging	Allows citizen developers from the business side to participate in the integration process, using low-code, web-based integration and messaging tools.

Table 2. Features and benefits of Red Hat Integration

Technical specifications

Red Hat Integration helps developers create, extend, and deploy container-based integration services across hybrid and multicloud environments. Developers can use these capabilities to connect and share data between the required applications and systems.

Component	Function
Application runtimes	Red Hat Runtimes is a set of products, tools, and components to develop and maintain cloud-native applications. It offers lightweight runtimes and frameworks for highly distributed cloud environments (such as microservices), in-memory caching for fast data access, and messaging for quick data transfers that support existing applications.
API management	Red Hat 3scale API Management is an infrastructure platform on which to share, distribute, control, monetize, and provide security for APIs.
Integration	Red Hat Fuse is a distributed, cloud-native integration solution that lets users access a range of design patterns and connectors and choose their own programming language, containers, and deployment preferences—including on-premise, in public and private clouds, or as a hosted service. Red Hat Fuse also provides a cloud-hosted integration toolchain and runtime, available directly from a browser. Users can deploy integration without installation.

Component	Function
Events and messaging	<p>Red Hat AMQ is a lightweight messaging platform for real-time integration. Based on open source communities like Apache ActiveMQ and Apache Kafka, it reliably and scalably delivers information like pricing updates, order acknowledgements, and delivery schedules between distributed endpoints such as distribution centers, warehouses, storefronts, and headquarters.</p> <p>Red Hat AMQ broker is a pure-Java™ multiprotocol message broker with persistence and advanced high-availability modes.</p> <p>AMQ interconnect is a high-speed, low-latency Advanced Message Queuing Protocol (AMQP) 1.0 message router on which to build a fault-tolerant messaging network to connect clients and brokers.</p> <p>Red Hat AMQ Online is a self-service messaging platform that offers end users access from an intuitive browser console. Users can provision messaging without installation, configuration, or maintenance.</p>
Change data capture	<p>Change data capture provides agents that convert changes to disparate databases into events that can flow where they are needed, when they are needed. Red Hat Integration also offers transformation and routing capabilities based on the Apache Camel technology inside the streams.</p>
Service registry	<p>The service registry contains contracts and metadata definitions for all streaming and synchronous traffic. This critical information is collected and distributed to developers to help participants correctly interpret data.</p>

Component	Function
Contract and metadata authoring and life-cycle management	The API designer , based on the open source Apicurio community, provides an interface for building, sharing, and discovering contract metadata. Apicurio can maintain the full life cycle of the artifacts and ensure that security is enforced.
Authentication (SSO)	Based on the Keycloak project, Red Hat's single sign-on (SSO) technology allows customers to make web applications more secure by providing web SSO capabilities based on popular standards such as Security Assertion Markup Language (SAML) 2.0, OpenID Connect, and OAuth 2.0. The SSO server can act as a SAML or OpenID Connect-based identity provider, integrating your enterprise user directory or third-party SSO provider for identity information with your applications via standards-based tokens.

Table 3. Descriptions of Red Hat Integration products and components

North America

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About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.